












Date: Friday, 20/06/2008 1:11:03 PM  
 User: Julie Lecocq

## Process Sheet

<b>Customer</b>	: CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b>	: SKIDTUBE ASSEMBLY
<b>Job Number</b>	: 39989		
<b>Estimate Number</b>	: 10022	<b>Part Number</b>	: D205634011
<b>P.O. Number</b>	:	<b>Drawing Number</b>	: N/A
<b>This Issue</b>	: 20/06/2008 <b>S.O. No.</b> :	<b>Project Number</b>	: N/A
<b>Prsht Rev.</b>	: NC	<b>Drawing Revision</b>	: N/A
<b>First Issue</b>	: // <b>Type</b> : SKIDTUBES	<b>Material</b>	:
<b>Previous Run</b>	: 39988	<b>Due Date</b>	: 07/07/2008 <b>Qty:</b> 1 <b>Um:</b> Each
<b>Written By</b>	: <u>JUD 08.6.20</u>		
<b>Checked &amp; Approved By</b>	: <u>JUD 08.6.20</u>		
<b>Comment</b>	: Est Rev:P 02.08.28 Removed QC5 from Step 5 KJ		
<b>Additional Product</b>			
Job Number: 			
<b>Seq. #:</b>	<b>Machine Or Operation:</b>	<b>Description :</b>	
1.0	DC	DOCUMENT CONTROL	
			
<b>Comment:</b> DOCUMENT CONTROL <u>JUD 08.6.20</u> Photocopy bluefile & type labels per PPP D205-634-011 CHG005 <u>08/07/04</u>			
2.0	PACKAGING 1	PACKAGING RESOURCE #1	
			
<b>Comment:</b> PACKAGING RESOURCE #1 Pick Packing Kit			
3.0	39989A	SKID TUBE ASSEMBLY	
			
<b>Comment:</b> Sub-Component SKID TUBE ASSEMBLY 1 x D205-634-041 Batch <u>39989</u> <u>08/07/04</u> (KC)			
4.0	K10003	Saddle, D205-634-011	
			
<b>Comment:</b> Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s) Pick: Qty Part Number Description Batch 1 K10003 Saddle Kit <u>38907</u> <u>08/07/04</u> (KC)			
5.0	QC4	INSPECT 100% KITS FOR COMPLETENESS	
			
<b>Comment:</b> INSPECT 100% KITS FOR COMPLETENESS <u>08/07/04</u>			

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 20/06/2008 1:11:26 PM  
 User: Julie Lecocq

## Process Sheet

<b>Customer</b> : CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b> : SKID TUBE ASSEMBLY
<b>Job Number</b> : 39989A	
<b>Estimate Number</b> : 10023	
<b>P.O. Number</b> :	<b>Part Number</b> : D205634041
<b>This Issue</b> : 20/06/2008 <b>S.O. No.</b> :	<b>Drawing Number</b> : D2580 REV D
<b>Prsht Rev.</b> : NC	<b>Project Number</b> : N/A
<b>First Issue</b> : / / <b>Type</b> : SKIDTUBES	<b>Drawing Revision</b> : D
<b>Previous Run</b> : 39988A	<b>Material</b> :
<b>Written By</b> :	<b>Due Date</b> : 07/07/2008 <b>Qty:</b> 1 <b>Um:</b> Each
<b>Checked &amp; Approved By</b> : <u>JUL 08.6.20</u>	
<b>Comment</b> : Est Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ	
Est Rev. O 06.02.28 Added paperwork EC	
Est Rev:P 07-07-09 SS Wearplates & Gaskets JLM	

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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**Comment:** DOCUMENT CONTROL

Photocopy D205-634 bluefile &amp; type labels per PPP D205-634-041 CHG002

N/A

2.0	D25001190	Ext'n -I' Beam Tube 4"
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**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2500-1-190	Skid Tube Extrusion	37544

RT 08 06-23

3.0	D2596	Web, 205 Skidtube
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**Comment:** Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2596	205 Web	37538

RT 08 -06-23

4.0	SKIDTUBES 1	SKIDTUBE RESOURCE 1
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**Comment:** LANDING GEAR RESOURCE 1

1- Inspect mat'l D2500-1-190 for damage

2-Cut D2500-1-190 per Dwg D2580 if necessary Deburr ends

3-Acid etch and Alodine tube per QSI 005 4.1

RT 08 -06-23

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Friday, 20/06/2008 1:11:26 PM  
User: Julie Lecocq

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 39989A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

① H 8-6-23

6.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes using drill jig DT 8149(Do not use cutting fluid)

2-Open holes to 0.500" as per Dwg D2580without cutting fluid

3-Countersink holes as per Dwg D2580without cutting fluid

4-Deburr and blow out all chips from inside of tube

5-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting

Pick:

Qty Part Number Description Batch

A/R Sikaflex-291 107893

Sikaflex expire date: 08-10-01

Start Time: 1:30 Date: 08 06-23

Fin Time: 1:30am Date: 08-06-24

FT 08-06-23

FT 08-06-23

7.0

BENDING

BENDING MACHINE - SKIDTUBES



Comment: BENDING MACHINE

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

FT 08-06-24

8.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Deburr ends

2-Prepare tube for welding, remove alodine as required.

SL 8-6-24

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 39989A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*80806/2400*

10.0

D25763

Step (maching detail)



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2576-3	Step	<i>38392 BE 08/06/25</i>

11.0

D2579

Crossbolt Spacer



Comment: Qty.: 20.0000 Each(s)/Unit Total : 20.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
20	D2579	Spacers	<i>38659</i>

*21 08-06-24*

12.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

2-Weld step D2576 as per Dwg. D2580 and QSI 004

A/R

Aluminum Rod

*m108096*

*BE 08/06/25*

3-Weld crossbolt spacers D2579 as per Dwg. D2580 and QSI 004.

For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill

A/R

Aluminum Rod

*m108096*

*BE 08/06/25*

4-Grind welds as per Dwg D2580 Grind flush ridge made from bending

5-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64", adjust stopper not to hit web. Deburr

6-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580. Deburr holes

7-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

8-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

*AWM  
8-6-25*

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 39989A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

08/06/25 (X)

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/06/25 (X)

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Pressure wash as per QSI 005

m-l 08/06/26 (X)

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

8:00

OVEN TEMPERATURE:

320

FINISH TIME:

8:30

08/07/01 (X)

17.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08/07/01 (X)

18.0

D2855

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cap

Batch:

B38395

m-l

19.0

AN35A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

Batch:

M100188

m-l 08/07/01 (X)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 39989A

Part Number: D205634041

Job Number:



Seq. #:	Machine Or Operation:	Description :
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20.0	AN960JD10L	Washer
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Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Washer

Batch:

M 104885

m-l

21.0	ALS71032130	Insert
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Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

Insert

Batch:

M 105819

m-l

22.0	AN3C4A	BOLT
------	--------	------



Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

BOLT

Batch:

M 168302

m-l

23.0	AN960C10L	washer
------	-----------	--------



Comment: Qty.: 50.0000 Each(s)/Unit Total: 50.0000 Each(s)

washer

Batch:

M 108077

m-l

24.0	D356613	Gasket
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

GASKET

Batch:

B 39574

m-l

25.0	D35665	Gasket
------	--------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

GASKET

Batch:

B 39998

m-l

26.0	D35661	Gasket
------	--------	--------



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

GASKET

Batch:

B 40092

m-l 08/07/02

(X)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Friday, 20/06/2008 1:11:26 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 39989A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

27.0

D356413

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch:

B39791

FX

28.0

D356411

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch:

B39133

FX

29.0

D35649

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch:

B39792

FX

30.0

D35645

Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch:

B39573

FX

31.0

D25943

O-Ring, 205 Skidtube



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

O-Ring

Batch:

B29908

FX

32.0

D25941

Plug, 205 Skidtube



Comment: Qty.: 16.0000 Each(s)/Unit Total : 16.0000 Each(s)

Plug

Batch:

B38950

FX

33.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

(X)

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R

Sikaflex-291

M107888

M-L

08/07/03

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Friday, 20/06/2008 1:11:26 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SKID TUBE ASSEMBLY

Job Number: 39989A

Part Number: D205634041

Job Number:



Seq. #:

Machine Or Operation:

Description :

Sikaflex expire date: 08/11

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291

Sikaflex expire date: 08/11

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch: M107888

34.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024

35.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-634-041

Location:

PPP Rev:

Rev H

36.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mf 08-07-08

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

**RELEASED**  
07.06.28 *[Signature]*

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:  
SEE NOTES ON  
PAGE 2 FOR D2580-041 AND  
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 32989A

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NO. 158

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay E.  
Job number: B39517 A  
Part number: A205634041  
Description: Skid tube  
Welding Process: Tig[ ☒ ] Mig[ ☐ ]  
Base material: Alum.  
Current: AC[ ☒ ] DC[ ☐ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[ ☒ ] fail[ ☐ ]  
Penetration: pass[ ☒ ] fail[ ☐ ]

UNACCEPTABLE

Cracks: pass[ ☒ ] fail[ ☐ ]  
Undercut: pass[ ☒ ] fail[ ☐ ]  
Pin holes: pass[ ☒ ] fail[ ☐ ]  
Overlap (cold lap): pass[ ☒ ] fail[ ☐ ]  
Porosity (surface): pass[ ☒ ] fail[ ☐ ]  
Coloration: pass[ ☒ ] fail[ ☐ ]

Qualifier David Buehl Date of Test Coupon 08/06/02  
Welder Barclay Elbert Date of Test Coupon 08/06/02

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

NO. 158

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay E.  
Job number: 839517 A  
Part number: A205634041  
Description: Skid tube  
Welding Process: Tig[ ☒ ] Mig[ ]  
Base material: Alum.  
Current: AC[ ☒ ] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[ ☒ ] fail[ ]  
Penetration: pass[ ☒ ] fail[ ]

UNACCEPTABLE

Cracks: pass[ ☒ ] fail[ ]  
Undercut: pass[ ☒ ] fail[ ]  
Pin holes: pass[ ☒ ] fail[ ]  
Overlap (cold lap): pass[ ☒ ] fail[ ]  
Porosity (surface): pass[ ☒ ] fail[ ]  
Coloration: pass[ ☒ ] fail[ ]

Qualifier David Dugal Date of Test Coupon 08/06/02  
Welder Barclay Elbert Date of Test Coupon 08/06/02

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Diagram illustrating the cross-section of a circular beam with four vertical reinforcement bars. The diameter is 16 inches. The distance between the centerlines of the outer bars is 3.500 inches. The distance from the centerline of an outer bar to the inner face of the concrete is 1.750 inches. The bars are shown with hooks at the top and bottom.

RELEASED  
07-06-28

Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of the component with the following labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576
- $\frac{1}{4}$

Technical drawing of a bolted joint assembly. The drawing shows a cross-section of a bolted joint with the following labels and dimensions:

- DRILL PRIOR TO D2855 CAP INSTALLATION (2 PLACES)**: Points to the pre-drilled holes in the main plate.
- SEAL WITH SIKAFLEX-241/-291**: Points to the sealant applied to the joint.
- AN3-5A BOLT (1)**: Points to the bolt used for assembly.
- AN96QJD10L WASHER (1)**: Points to the washer used for assembly.
- (2 PLACES)**: Indicates the number of locations for the washer.
- D2855 CAP**: Points to the cap used for assembly.
- 0.40**: Dimension indicating the thickness of the main plate.

5

D2579 SPACER

D2596 WEB (REF)

ALST-1032-130 (REF)  
(TYP 50 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

37.50  
DISTANCE TO AFT END  
OF D2596 WEB

3  
7

1.750 1.750

REFER TO DETAIL A

8.750  
17.375  
26.000  
34.188

57.313 (REF)  
7 EQUAL SPACES  
8.188 PITCH

38.0 91.500 190.0  
(D2500-1)

#0.508 (TYP.)  
(40 PLACES)

REFER TO DETAIL A

Technical drawing of a road cross-section showing two views of a road with a central drainage ditch. The left view shows a road with a 1.4m wide shoulder and a 1.0m distance between the hole and the tangent point. The right view shows a road with a 20.0m wide shoulder and a 32.0 ± 1.0m distance between the hole and the tangent point. A 4m wide area is marked on the right side of the road.

[illegible]

3  
13

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07.02.27

205 SKIDTUBE ASSEMBLY

**DART AEROSPACE LTD.**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.	D2580
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REV. D

SHEET 2 OF 3

**SCALE**

1:24

RELEASED  
07 Dec 28

Diagram illustrating the grinding locations for the D2576-3 step. The diagram shows a cross-section of the step with the following labels:

- GRIND FLUSH (4 PLACES)
- GRIND FLUSH
- D2576-3 STEP
- GRIND FLUSH
- LOCATION RIDGE ON UNDERSIDE OF D2576
- $\frac{1}{4}$

Ø0.208

DRILL PRIOR TO D2855 CAP  
INSTALLATION (2 PLACES)

AN3-5A BOLT (1)  
AN96QJD10L WASHER (1)  
(2 PLACES)

D2855 CAP

0.40

SEAL WITH  
SIKAFLEX-241/-291

SEE NOTE ii)

D2579 SPACER

WEB (REF)

130 (REF)  
0 PLACES)

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

- i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

37.50  
DISTANCE TO AFT END  
OF D2596 WEB

3 7

1.750 1.750

Ø0.508 (TYP.)  
(40 PLACES)

REFER TO DETAIL E

REFER TO DETAIL A

8.750 17.375 26.000 34.188

57.313 (REF)  
7 EQUAL SPACES  
8.188 PITCH

38.0 91.500 190.0  
(D2500-1)

Technical drawing of a shaft with the following dimensions and callouts:

- Overall length: 51.340
- Distance from left end to first hole: 5.985
- Distance between first and second holes: 5.338 (REF)
- Distance between second and third holes: 39.580
- Distance from third hole to right end: 5.915
- Hole diameter:  $\phi 0.508$  (8 PLACES)
- Distance from right end to last hole: 20.0
- Right end diameter:  $\phi 0.640$
- Left end chamfer: 1.4
- Left end chamfer angle: 4
- Distance between hole and tangent point (left): 1.0
- Distance between hole and tangent point (right): 1.0
- Distance from left end to tangent point: 13.4
- Distance from right end to tangent point:  $32.0 \pm 1.0$
- Right end chamfer angle: 4
- Right end chamfer height: 11.5

0.5 1.5 1.5

REFER TO DETAIL G

NO C'BORE NO PLUG

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

BLACK ANTI-SKID TOP OF STEP TO 0.5 ABOVE BOTTOM EDGE

WELD AS PER DETAIL F

NO C'BORE NO PLUG

NO C'BORE NO PLUG

D3566-1

D3566-5

D3564-11

D3564-5

D3564-9

D3564-13

AN3C4A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

8

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205 SKIDTUBE ASSEMBLY

SCALE  
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